

Arshvir (Arsh) Jhaj

Canadian Citizen

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EDUCATION

- **University of British Columbia** Vancouver, BC
M.Sc., Computer Science September 2021 – November 2023 (expected)
 - GPA: 4.0/4.0
 - **Research:** Theoretical machine learning, distributed systems, convex optimization, AI for social good (e.g., differential privacy, fairness). Advised by Prof. Danica Sutherland
- **University of British Columbia** Vancouver, BC
B.Sc., Combined Major Computer Science and Mathematics September 2016 – May 2021
 - GPA: 3.6/4.0
 - Graduated with Distinction.

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, JavaScript, TypeScript, C#, C, C++, MatLab (*in order of experience*)
- **Technologies:** Git, Jira, Node.js, Jasmine, Mocha, Selenium, Maven, Jenkins (*in order of experience*)

EMPLOYMENT

- **University of British Columbia, Department of Computer Science** Vancouver, BC
Teaching Assistant May 2017 –
 - Teaching assistant for a variety of computer science courses (e.g., introductory programming, discrete mathematics, and advanced algorithms) for the majority of academic terms since July 2017.
 - In Summer 2021, worked with Prof. Nicholas Harvey to develop a new course (CPSC 436R) on randomized algorithms, taught for the first time at UBC in September 2021.
- **University of British Columbia, Department of Computer Science** Vancouver, BC
Research Assistant May 2021 – August 2021
 - Worked with Prof. Nicholas Harvey on an open problem in **theoretical machine learning**. Primarily worked on improving known error estimates for stochastic subgradient descent on non-smooth convex functions. Funded by an NSERC Undergraduate Student Research Award (USRA), the premier undergraduate research award in Canada.
- **Dodge Data & Analytics** Vancouver, BC
Software Quality Engineer Intern January 2019 – April 2019
 - Involved in the backend development of product to search and filter construction projects and constructed-related products, chiefly using **Java** with limited exposure to **C#** and **ASP.Net** as well
 - Identified two bottlenecks in the recursive filtering logic, resulting in a **42% performance increase**.
 - Helped design and deploy frontend e2e tests written using **Selenium, Jasmine and Node.js**, as well as backend **REST API** tests using the Karate testing framework

SELECTED PROJECTS

- **ConnectX:** A **Java**-based application which allows the user to play Connect4 against an AI. The AI is based on a minimax algorithm. Uses the Swing GUI.
- **tabSort:** A simple **JavaScript**-based Chrome extension which sorts tabs by site, using the **Chrome API**. Published on Chrome Web Store.
- **insightUBC:** A full-stack web app to query UBC courses. Developed with **Node.js, JavaScript and TypeScript**.

SELECTED AWARDS

- **Stanley M Grant Scholarship in Mathematics, University of British Columbia** 2021
- **NSERC USRA Grant, Natural Sciences and Engineering Research Council of Canada (NSERC)** 2021
- **Dean's Honour List, University of British Columbia** 2021, 2020
- **Dean of Science Scholarship, University of British Columbia** 2020